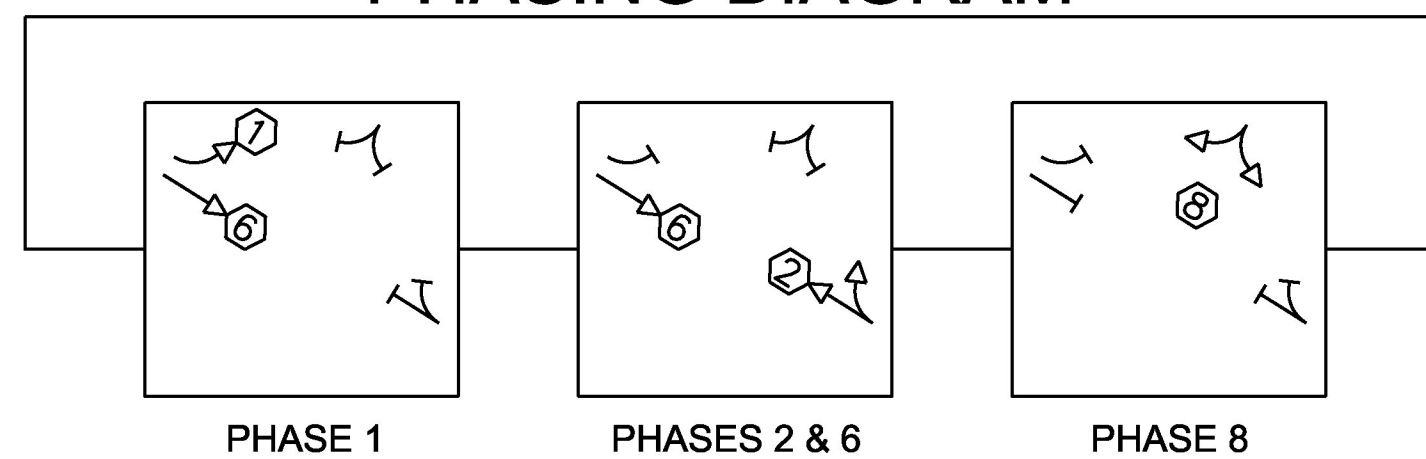


WIRED CONDUIT	WIRED	SPARE	DESCRIPTION
POLE TO JB-1	2"	2"	FUTURE USE
POLE TO STANCHION	110'	133'	POWER
STANCHION TO CC-1	35'		POWER
CC-1 TO JB-1	13'		SIGNAL & LIGHTING
CC-1 TO JB-1	13'		DETECTOR
CC-1 TO JB-1		13'	FUTURE USE
CC-1 TO MAP-1	18'		SIGNAL & LIGHTING
CC-1 TO MAP-1	18'		DETECTOR
CC-1 TO MAP-1		18'	FUTURE USE
JB-1 TO JB-2	85'		SIGNAL & LIGHTING
JB-1 TO JB-2	85'		DETECTOR
JB-1 TO JB-2		85'	FUTURE USE
JB-1 TO JB-2		85'	FUTURE USE
JB2 TO MAP2	81'		SIGNAL & LIGHTING
JB2 TO MAP2	81'		DETECTOR
JB2 TO MAP2		81'	FUTURE USE
CC-1 TO JB-3	17'		LIGHTING
CC-1 TO JB-3		17'	FUTURE USE
JB-3 TO JB-4	83'		LIGHTING
JB-3 TO JB-4	83'	83'	DETECTOR
JB-4 TO SL-3	26'		LIGHTING
JB-4 TO SL-3		26'	FUTURE USE
SUBTOTAL	665'	408'	
ROUNDING	25'	22'	
TOTALS	690'	430'	

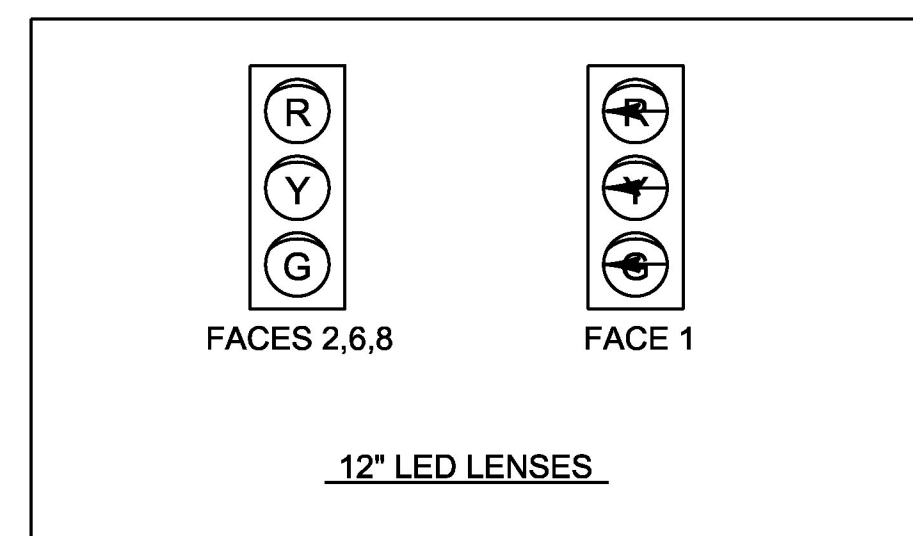
CONTROLLER TIMING CHART									
PHASE	1	2	3	4	5	6	7	8	9
IN USE	X	X				X		X	
TRAFFIC MOVEMENT									
MIN. GREEN	5	8				8		8	
MAX 1 - GREEN (OFF)	5	18				30		16	
MAX 2 - GREEN (AM)	7	22				36		10	
MAX 3 - GREEN (PM)	7	22				36		10	
YELLOW CLEARANCE	5.0	5.0				5.0		4.5	
ALL RED CLEARANCE	2.0	2.0				2.0		2.0	
VEHICLE EXTENSION	3.0	3.0				3.0		3.0	
DELAY GREEN									

LIST OF MAJOR EQUIPMENT		
EQUIPMENT ITEM 678.15 - (VT ROUTE 100 & VT ROUTE 103)	QUANTITY	REMARKS
STEEL SIGNAL POLE AND MAST ARM (45') (MA-1)	1	POWDER COAT FLAT BLACK (MAP-1)
STEEL SIGNAL POLE AND MAST ARM (30') (MA-2)	1	POWDER COAT FLAT BLACK (MAP-2)
STEEL MAST ARM (20') (MA-3)	1	POWDER COAT FLAT BLACK (MAP-2)
POWER METER ON STANCHION	1	
SIGNAL CONTROLLER	1	ECONOLITE COBALT, NEMA TS2 TYPE 2
NEW 12-INCH LED SIGNAL HEADS (ONE-WAY, 3-SECTION, VISORS, DISCONNECT HANGERS, BACKPLATES AND MOUNTING HARDWARE)	7	FLAT BLACK IN COLOR, 2" RETROREFLECTIVE TAPE BORDER ON BACK PLATES
SIGNAL HEAD BRACKETS	7	
NEMA P44 BASE MOUNTED CONTROLLER CABINET WITH 15-INCH EXTENDED BASE ON A CONCRETE FOUNDATION, WITH ANCILLARY EQUIPMENT	1	POWDER COAT FLAT BLACK
VEHICLE DETECTOR EXTENSION BRACKET	5	
STOP BAR DETECTOR ASSEMBLY	3	WAVETRONIX SMARTSENSOR MATRIX
ADVANCE DETECTOR ASSEMBLY	2	WAVETRONIX SMARTSENSOR ADVANCE
VEHICLE DETECTION PROCESSOR	2	
NETWORK ROUTER	1	
NETWORK SWITCH	1	
GPS TIME CLOCK	1	

PHASING DIAGRAM



PROPOSED SIGNAL FACE ARRANGEMENTS



TIME OF DAY PROGRAM			
	WEEKDAY TIMINGS		
MAX 1 - OFF PEAK	12:00 AM	TO	6:00 AM
MAX 2 - AM PEAK	6:00 AM	TO	9:00 AM
MAX 1 - OFF PEAK	9:00 AM	TO	4:00 PM
MAX 3 - PM PEAK	4:00 PM	TO	6:00 PM
MAX 1 - OFF PEAK	6:00 PM	TO	12:00 AM

NOTES:

- ANY OTHER MISC. EQUIPMENT NECESSARY TO PROVIDE FULLY FUNCTIONAL DILEMMA ZONE & VEHICLE DETECTION SYSTEMS SHALL BE INCIDENTAL TO ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (VT ROUTE 100 & VT ROUTE 103).
- VEHICLE ADVANCE DETECTOR SHALL PROVIDE DETECTION OF RANGE, SPEED, AND ETA OF APPROACHING VEHICLES IN A CONTINUOUS RANGE OF 600 FEET FROM THE SENSOR.
- A SENSOR DETECTION SHALL EXTEND THE GREEN TIME BY 3 SECONDS.
- VEHICLE DETECTORS SHALL BE PLACED SO THAT OCCLUSION IS MINIMIZED AND PHASING IS NOT AFFECTED.
- CONDUIT NOTED AS SPARE WILL BE PAID AS ELECTRICAL CONDUIT. ALL WIRED CONDUIT, REGARDLESS OF TYPE, WILL BE PAID AS WIRED CONDUIT.
- AN ASTRONOMICAL CLOCK SHALL BE INSTALLED INTO THE STREET LIGHTING SYSTEM AND WILL BE PAID FOR UNDER ITEM NUMBER 679.54, STREET LIGHT CONTROL DEVICE.
- ITEMS LISTED ARE APPROXIMATE LOCATIONS AND MAY BE MODIFIED BY THE ENGINEER IN THE FIELD.

LEGEND

- MAST ARM & POLE
- CONTROLLER CABINET
- HEAVY DUTY JUNCTION BOX
- PEDESTAL POST
- SIGNAL HEAD WITH PHASE NO.
- PEDESTRIAN SIGNAL HEAD
- WIRED CONDUIT
- WIRED CONDUIT IN ELECTRICAL CONDUIT SLEEVE
- MAST ARM-MOUNTED SIGN
- DETECTION AREA

678.15 - TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (VT ROUTE 100 & VT ROUTE 103)
SEE LIST OF MAJOR EQUIPMENT, THIS SHEET

CONSTRUCT MAST ARM POLES
STA. 214+77.47, RT 55.36' (MAP-1)
STA. 267+23.89, RT 8.21' (MAP-2)

CONSTRUCT CONTROLLER CABINET (BASE-MOUNTED)
STA. 214+85.00, RT 54.62' (CC-1)

DILEMMA ZONE DETECTION SYSTEM
STA. 214+77.47, RT 55.36' (DZD-1)
STA. 267+23.89, RT 8.21' (DZD-2)

CONSTRUCT POWER STANCHION
STA. 215+21.60, RT 53.14'

678.23 - WIRED CONDUIT
SEE CHART, THIS SHEET

678.21 - ELECTRICAL CONDUIT
SEE CHART, THIS SHEET

900.640 - SPECIAL PROVISION (HORIZONTAL DIRECTIONAL DRILLING, 12" CASING PIPE)
STA. 214+93.38, LT 34.77' - STA. 214+93.72, RT 47.56' (85')
STA. 214+00.42, RT 56.67' - STA. 214+72.37, RT 59.36' (72')

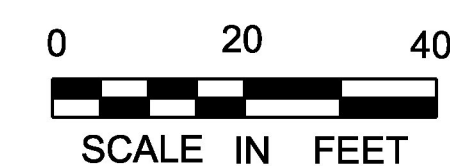
679.46 - STREET LIGHT ASSEMBLY
STA. 213+80.00, RT 45.93' (16')(SL-3)

679.47 - BRACKET ARM
STA. 214+77.47, RT 55.36' (16')(SL-1)
STA. 267+23.89, RT 8.21' (16')(SL-2)

679.50 - LUMINAIRE
STA. 214+61.03, RT 44.17' (SL-1)
STA. 267+33.38, RT 21.09' (SL-2)

679.54 - STREET LIGHT CONTROL DEVICE
STA. 215+21.60, RT 53.14'

900.620 SPECIAL PROVISION (JUNCTION BOX, HEAVY DUTY)
STA. 214+93.75, RT 48.57' (JB-1)
STA. 214+93.37, LT 36.23' (JB-2)
STA. 214+73.61, RT 59.91' (JB-3)
STA. 213+96.83, RT 57.04' (JB-4)



PROJECT NAME: LUDLOW
PROJECT NUMBER: HES SGNL(44)

FILE NAME: t13b020_sig.dgn
PROJECT LEADER: P. COBURN
DESIGNED BY: M. BOGACZYK
TRAFFIC SIGNAL PLAN SHEET

PLOT DATE: 4/19/2017
DRAWN BY: M. BOGACZYK
CHECKED BY: P. COBURN
SHEET 35 OF 43